ABSTRACT

Elections are one of the main pillars of the democratic process, allowing citizens to directly elect their representatives. This report discusses mixed electoral systems that combine district and balanced representation systems. In addition, it also reviews the basic concepts of machine learning, which is a computer application that enables learning from data to make future predictions. The three main categories of machine learning are Supervised Learning, Unsupervised Learning and Reinforcement Learning.

Finally, the report describes cloud computing, an application operating system that enables distributed storage and processing of data, without requiring knowledge of the exact location of the resources. In this digital era, technology is developing rapidly, one of which is Machine Learning. This report discusses the application of Machine Learning technology in the Election C1 Form reporting process to improve transparency and integrity in the context of elections. The research method involves collecting data from a number of previous elections, as well as developing a Machine Learning model to automatically detect and validate data from C1 forms.

The machine learning model used is YOLOv8 to perform object detection on the election result form. Object detection on the election result numbers is done by training first in order to get accurate results. The results of the analysis show that the use of this technology can reduce human error and potential fraud in reporting election results. The practical implication of this research is the increased public trust in the electoral process and the strengthening of democratic integrity. Further research is needed to optimize the performance of the model and ensure successful implementation on a wider scale.

Keywords: *Mobile Applications, Cloud Computing, Object Detection*, DocsQuik*, C1 Form, Machine Learning, Elections, and* YOLOv8.